

Message Text

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AMCONSUL BOMBAY

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UNCLAS NEW DELHI 0796

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TAGS: PINR, IN

SUBJECT: FOREIGN SMALL EARTH-STATION TECHNOLOGY ASSESSMENT

REF: STATE 282811 AND 4864

1. THE EMBASSY IS ATTEMPTING TO OBTAIN DETAILED INFORMATION FROM APPROPRIATE GOI AGENCIES IN RESPONSE TO THE DEPARTMENT'S REQUEST FOR INFORMATION ON INDIA'S PLANS TO ACQUIRE SMALL EARTH-STATION SYSTEMS AND TECHNOLOGIES DURING THE 1975-1985 PERIOD. IN ORDER TO DEVELOP A MEANINGFUL TECHNOLOGICAL AND COMMERCIAL ASSESSMENT OF THE INDIAN NEEDS FOR HARDWARE AND OPPORTUNITIES FOR THE U.S. MANUFACTURERS, THE EMBASSY HAS REQUESTED SPECIFIC DATA FROM GOI'S SPACE APPLICATION CENTER (SAC), AHMEDABAD, ON THE POINTS MENTIONED IN REFTEL. SAC IS A DIVISION OF THE GOI'S DEPARTMENT OF SPACE (DOS) AND IS THE KEY AGENCY RESPONSIBLE FOR PLANNING AND EXECUTING PROJECTS INVOLVING THE APPLICATION OF APPROPRIATE SPACE TECHNOLOGIES AND DEVELOPING THE NECESSARY HARDWARE.

2. THE FOLLOWING INFORMATION, DEVELOPED ON THE BASIS OF DISCUSSIONS WITH OFFICIALS OF THE GOI PLANNING COMMISSION AND THE BRANCH SECRETARIAT OF THE DOS IN NEW DELHI, IS SUBMITTED AS AN INTERIM REPLY. A SUPPLEMENTARY REPORT WILL BE SUBMITTED UPON RECEIPT OF THE REQUESTED INFORMATION FROM SAC.

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3. (A) SMALL EARTH-STATIONS IN INDIA:

BY JUNE, 1975 THREE SMALL EARTH-STATIONS (LOCATED AT AHMEDABAD, NEW DELHI AND AMRITSAR) WILL BE OPERATIONAL IN INDIA. THESE EARTH-STATIONS WILL BE USED FOR THE SATELLITE INSTRUCTIONAL TELEVISION EXPERIMENT (SITE) TO BE CONDUCTED FROM ABOUT AUGUST 1, 1975 TO AUGUST 1, 1976 WITH THE APPLICATION TECHNOLOGY SATELLITE (ATS-F) OF THE U.S. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA). THE AHMEDABAD STATION IS ALREADY FUNCTIONING AS AN EXPERIMENTAL SATELLITE COMMUNICATIONS EARTH-STATION OF SAC. IT HAS BEEN STRENGTHENED AND EQUIPPED TO SERVE AS A PRIME EARTH-STATION FOR SITE WITH THE ASSISTANCE RECEIVED FROM UNITED NATIONS DEVELOPMENT PROGRAM (UNDP). THE NEW DELHI AND AHMEDABAD STATIONS WILL ALSO BE CAPABLE OF RECEIVING PROGRAMS FROM THE SATELLITE. THE PROGRAMS RECEIVED WILL BE BEAMED THROUGH CONVENTIONAL T.V. TRANSMITTERS. THE AMRITSAR STATION WILL BE A "RECEIVE ONLY" EARTH-STATION.

(B) HARDWARE:

IN RECENT YEARS, INDIA HAS MADE GOOD PROGRESS IN BUILDING UP THE NECESSARY TECHNOLOGICAL BASE FOR THE MANUFACTURE OF AN IMPRESSIVE RANGE OF HARDWARE REQUIRED FOR EARTH-STATIONS. SAC IS THE PRINCIPAL AGENCY ENTRUSTED WITH THE TASK OF INNOVATING AND DEVELOPING A MAJOR SEGMENT OF HARDWARE REQUIRED FOR SITE. SAC'S EXPERIMENTAL SATELLITE COMMUNICATIONS EARTH STATION (ESCES) HAS ALREADY ASSEMBLED AND TESTED A

860-MHZ DOWN-CHAIN; A 4 GHZ DOWN-CONVERTOR; A 6-GHZ CHAIN UP TO THE UP-CONVERTOR STAGE; A 3-KILOWATT 6-GHZ HIGH-POWER AMPLIFIER; A DIRECT RECEIVER (860 MHZ) COMPRISING OF LOW-NOISE TRANSISTOR AMPLIFIER; AND DIRECT DEMODULATOR (860 MHZ) AND BASEBAND UNITS. THE ESCES HAS ALSO DESIGNED AND TESTED A 3-KILOWATT 6-GHZ AIR-COOLED HIGH POWER AMPLIFIER; 860 MHZ AND 2.5 GHZ LOW NOISE TRANSISTOR AMPLIFIERS; TUNNEL DIODE 4-GHZ AMPLIFIERS; A 4-GHZ PARAMETRIC AMPLIFIER; WAVEGUIDE DIRECTIONAL-COUPERS; CIRCULATORS; ISOLATORS; PIN-DIODE SWITCHES AND ATTENUATORS; AND VARIOUS FEED COMPONENTS FOR THE EXISTING

14 METER PARABOLIC ANTENNA, INCLUDING TRANSMIT-REJECT FILTER; ROTARY JOINT POLARISOR; AND CORRUGATED LOW-NOISE FEED HORN. OTHER HARDWARE ITEMS FABRICATED UNDER DEVELOPMENT BY ESCES INCLUDE CONICAL LOG SPIRAL WIDEBAND FEED FOR A 9-METER DIAMETER CHICKENMESH ANTENNA, ALONG WITH A LOW NOISE 860 MHZ BAND PASS FILTER; 20 FT. DIA.

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CHICKENMESH ANTENNA; 6-GHZ UP-CONVERTOR AND 4-GHZ DOWN-CONVERTOR; REPRODUCTION OF 70-MHZ MODULATORS AND DEMODULATORS. THE ELECTRONICS SYSTEMS DIVISION OF SAC HAS DEVELOPED A LIMITED REBROADCASTING SYSTEM FOR RECEIVING AND RETRANSMITTING SIGNALS.

(C) GOI POLICY ON PURCHASE OF HARDWARE:

THE PROCUREMENT POLICY OF THE GOI IS STRONGLY ORIENTED TOWARD MAXIMUM RELIANCE UPON DOMESTIC TECHNOLOGICAL AND PRODUCTION CAPABILITY.

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WITH STRICTEST POSSIBLE LIMITATION ON THE IMPORTATION OF COMPLETE SYSTEMS AND EQUIPMENT INsofar AS PRACTICABLE. ALTHOUGH THE PRIMARY FACTOR DICTATING SUCH A POLICY IS THE INDIAN BALANCE OF PAYMENTS POSITION, A VERY IMPORTANT DETERMINANT IS INDIA'S DESIRE FOR SELF-SUFFICIENCY. THIS POLICY ASSUMES AN EVEN GREATER IMPORTANCE IN THE STRATEGIC AREAS OF SPACE, COMMUNICATIONS AND DEFENSE. ALL GOI PURCHASE

DECISION-MAKING IS CONDITIONED BY A COMBINATION OF THESE CONSIDERATIONS AND THIS USUALLY LEADS TO THE GOI FAVORING LOCALLY MANUFACTURED SYSTEMS AND FABRICATED HARDWARE INSPITE OF THE GENERALLY HIGHER COSTS OF SUCH INDIGENOUS EQUIPMENT. IN CERTAIN SITUATIONS, GOI DECISION-MAKERS WILL EVEN SACRIFICE THE RELATIVE SOPHISTICATION OF IMPORTED EQUIPMENT IF AN INDIGENOUS PRODUCT IS AVAILABLE (OR CAPABLE OF DEVELOPMENT) AND ITS PERFORMANCE REGARDED AS "ADEQUATE" FOR BASIC INDIAN NEEDS. HOWEVER, WHEN A FIRM DECISION IS MADE TO IMPORT SYSTEMS OR HARDWARE THEN FACTORS SUCH AS FAVORABLE FOREIGN FINANCING/CREDIT AVAILABILITY; TECHNOLOGICAL SUPERIORITY OF THE PRODUCT

LINE; REPUTATION OF THE MANUFACTURER AND HIS ABILITY TO PROVIDE CONTINUING AFTER-SALES SERVICE AND MAINTENANCE ARE THE ESSENTIAL CONSIDERATIONS IN PROCUREMENT. SCHNEIDER

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